July 28, 2008

Vice President, Operations
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Indian Point Energy Center
450 Broadway, GSB
P.O. Box 249
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SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3 - REQUEST FOR ADDITIONAL INFORMATION REGARDING AMENDMENT APPLICATION ON CONTROL ROOM HABITABILITY (TAC NOS. MD7523 AND MD7524)

Dear Sir or Madam:

On December 18, 2007, Entergy Nuclear Operations, Inc. (Entergy), submitted an application for a proposed amendment for Indian Point Nuclear Generating Unit Nos. 2 and 3 which would revise the Technical Specifications related to control room habitability during postulated accidents.

The Nuclear Regulatory Commission staff is reviewing the submittal and has determined that additional information is needed to complete its review. The specific questions are found in the enclosed request for additional information (RAI). On July 22, 2008, the Entergy staff indicated that a response to the RAI would be provided within 30 days of the date of this letter.

Please contact me at (301) 415-2901 if you have any questions on this issue.

Sincerely,

/RA/

John P. Boska, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-247 and 50-286

Enclosure:
RAI

cc w/encl: See next page

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Division of Operating Reactor Licensing
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RAI
cc w/encl: See next page
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ADAMS ACCESSION NUMBER: ML082050388 *See memo dated June 23, 2008

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DATE	7/24/08	7/25/08	6/23/08	7/28/08

OFFICIAL RECORD COPY

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Indian Point Nuclear Generating Unit Nos. 2 & 3

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REQUEST FOR ADDITIONAL INFORMATION

REGARDING AMENDMENT APPLICATION ON CONTROL ROOM HABITABILITY

ENTERGY NUCLEAR OPERATIONS, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3

DOCKET NOS. 50-247 AND 50-286

In a letter dated December 18, 2007 (ADAMS Accession No. ML073620376), Entergy Nuclear Operations, Inc. (Entergy), submitted an application for a proposed amendment to the Technical Specifications (TSs) for Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3) which would revise the TSs related to control room habitability during postulated accidents. The Nuclear Regulatory Commission (NRC) staff is reviewing the submittal and has the following questions on the IP3 section of the submittal:

1. Explain how not adopting the license commitment associated with NRC approved Technical Specification Task Force (TSTF)-51, Revision 2, ensures that the lowest functional capability or performance levels of the Control Room Ventilation System required for safe operation of the facility is met per 10 CFR 50.36(d)(2)(i).

Background: 10 CFR 50.36(d)(2)(i) states TSs will include Limiting Conditions for Operations (LCO) which "are the lowest functional capability or performance levels of equipment required for safe operation of the facility." LCO 3.7.11, "Control Room Ventilation System (CRVS)," is retained in the TS in order to ensure that 10 CFR 50.36(d)(2)(i) is met.

The proposed Applicability for LCO 3.7.11 adds the phrase "During movement of recently irradiated fuel assemblies." This phrase was approved by the NRC for individual licensee adoption under TSTF-51, Revision 2, "Revise containment requirements during handling irradiated fuel and core alterations." However, licensees adding the term "recently" under TSTF-51, Revision 2, must make the following commitment which is consistent with draft NUMARC 93-01, Revision 3, Section 11.2.6 "Safety Assessment for Removal of Equipment from Service During Shutdown Conditions", subheading "Containment - Primary (PWR [Pressurized-Water Reactor])/Secondary(BWR [Boiling-Water Reactor])."

> The following guidelines are included in the assessment of systems removed from service during movement of irradiated fuel:
>
> - During fuel handling/core alterations, ventilation system and radiation monitor availability (as defined in NUMARC 91-06) should be assessed, with respect to filtration and monitoring of releases from the fuel. Following shutdown, radioactivity in the fuel decays away fairly rapidly. The basis of the Technical Specification operability amendment is the reduction in doses due to such decay. The goal of maintaining ventilation system and radiation monitor availability is to reduce doses even further below that provided by the natural decay.

- A single normal or contingency method to promptly close primary or secondary containment penetrations should be developed. Such prompt methods need not completely block the penetration or be capable of resisting pressure.

The purpose of the "prompt methods" mentioned above are to enable ventilation systems to draw the release from a postulated fuel handling accident in the proper direction such that it can be treated and monitored.

For licensee consideration, TSTF-51, Revision 2, was not approved under the Consolidated Line Item Improvement Process (CLIIP). As a result, NRC staff review is required for adoption of the term "recently." Therefore, approval of this license amendment request associated with IP3 will need to be done outside of the CLIIP process if the licensee wishes to adopt the term "recently."

2. Provide confirmation that the analysis approved by the NRC for IP3 Amendment No. 224 supports adoption of TSTF-51, Revision 2, thereby ensuring that the lowest functional capability or performance levels of the Control Room Ventilation System required for safe operation of the facility is met per 10 CFR 50.36(d)(2)(i).

Background: 10 CFR 50.36(d)(2)(i) states TSs will include LCOs which "are the lowest functional capability or performance levels of equipment required for safe operation of the facility." LCO 3.7.11, "Control Room Ventilation System (CRVS)," is retained in the TS in order to ensure that 10 CFR 50.36(d)(2)(i) is met.

The proposed Applicability for LCO 3.7.11 adds the phrase "During movement of recently irradiated fuel assemblies." This phrase was approved by the NRC for individual licensee adoption under TSTF-51, Revision 2, "Revise containment requirements during handling irradiated fuel and core alterations." The addition of the term "recently" associated with handling irradiated fuel is only applicable to those licensees who have demonstrated by analysis that after sufficient radioactive decay has occurred, off-site doses resulting from a fuel-handling accident remain below the Standard Review Plan limits (well within 10 CFR Part 100). This analysis appears to have been approved by the NRC for IP3 Amendment No. 224 (ML050750431). However, the licensee needs to provide confirmation that the analysis approved by the NRC for Amendment No. 224 supports adoption of the term "recently."

3. Explain how Criterion 3 of 10 CFR 50.36(d)(2)(ii) would be satisfied if there is an allowance in LCO 3.7.11 to move fuel prior to 84 hours after shutdown, when the Updated Final Safety Analysis Report (UFSAR) does not support such movements.

Background: In Section 14.2.1, "Fuel Handling Accidents" of the IP3 UFSAR, an assumption is stated as "No movement of irradiated fuel in the reactor is made until the reactor has been subcritical for at least 84 hours." The proposed Bases for LCO 3.7.11, "Control Room Ventilation System (CRVS)," state that the applicability of the LCO is "during the movement of recently irradiated fuel (i.e. fuel that has occupied part of a critical reactor core within the previous 84 hours)." As a result, the statement in the Bases could be used as an allowance to allow fuel movements prior to 84 hours after shutdown, if the CRVS was operable. This is contrary to the analysis in the UFSAR.

Criterion 3 of 10 CFR 50.36(d)(2)(ii) states a TS LCO of a nuclear reactor must be established for "a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." It is unclear how Criterion 3 of 10 CFR 50.36(d)(2)(ii) would be met if fuel movements prior to 84 hours after shutdown were allowed when the UFSAR does not support such movements.

As an example for reference, the IP2 UFSAR has a similar analysis, and the IP2 Bases have a statement of the "Technical Requirements Manual (TRM) 3.9.A, 'Decay Time – Refueling,' (Ref. 5) prevents any movement of recently irradiated fuel by prohibiting movement of any fuel in the reactor until 84 hours after reactor shutdown."

4. The licensee's proposed Conditions A and C are inconsistent with, and less conservative than, the approved TSTF-448, Revision 3. Explain the basis for not requiring actions for these two Conditions in accordance with TSTF-448, Revision 3.

Background: For IP3, proposed Condition A is applicable during movement of recently irradiated fuel assemblies when one CRVS train is inoperable for reasons other than Condition B. No follow-up actions are provided during fuel movements if the Required Actions of Condition A can not be completed within the required Completion Time of 7 days. For comparison purposes, TSTF-448, Revision 3, has a Condition D that contains follow-up actions during fuel movements if the Required Actions of Condition A cannot be completed within the required Completion Time of 7 days.

In addition, proposed Condition C is applicable during movement of recently irradiated fuel assemblies when two CRVS train are inoperable for reasons other than Condition B. The proposed Required Action for Condition C during movement of recently irradiated fuel assemblies is to restore one CRVS train to operable status within 72 hours. The proposed Required Actions for Condition C during movement of recently irradiated fuel assemblies is not in accordance with TSTF-448, Revision 3, and is less conservative. TSTF-448, Revision 3, has a Condition E that is applicable when two CRVS trains are inoperable during movement of recently irradiated fuel assemblies (regardless of whether the inoperability is due to an inoperable CRE boundary or not). The Required Actions of Condition E are to immediately suspend movement of recently irradiated fuel assemblies.

10 CFR 50.36(d)(2)(i) states "limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met." It is unclear why proposed Condition A and proposed Condition C should be permitted, as allowed by 10 CFR 50.36(d)(2)(i), given that the Conditions are not in accordance with and less conservative than the Conditions previously approved by the NRC under TSTF-448, Revision 3.